

**FIG. 1**

CS-D10	(1)	1	CDR1	50	QAVLTQ-PSSVSGAPGQRVTISC TGGSSNIGAGYDVH WYQQIPGTAPKLL (SEQ ID NO: 23)
CS-E11	(1)				QAVLTQ-PSSVSGAPGQRVTISC TGDRSNIGATYDVH WYQQLPGRAPKLL (SEQ ID NO: 20)
CS-A10	(1)				QSVLTQ-PPSVSVSPGQTATITC SG--DNLGDKS-VS WYQQKAGQSPVLV (SEQ ID NO: 26)
CS-D7	(1)				EIVMTQSPATLSVSPGERATLSC RA---SQYVSDNLA WYQQKPGQAPRLI (SEQ ID NO: 17)
BMV-C2	(1)				QSVLTQ-PPSVSAAPGQKVTISC SGSTSNIGNNY-VS WYQQHPGKAPKLM (SEQ ID NO: 32)
BMV-D4	(1)				QSVLTQ-PASVSGSPGQSITISC TGTSSDVGGYNYVS WYQQHPGKAPKLM
BMV-E6	(1)				QSVLTQ-PASVSGSPGQSITISC TGTSSDVGGYNYVS WYQQHPGKAPKLM
BMV-H11	(1)				QSVLTQ-PASVSGSPGQSITISC TGTSSDVGGYNYVS WYQQHPGKAPKLM (SEQ ID NO: 29)
CS-D10	(50)	51	CDR2	CDR3 103	IY GNSNRPS GVPDRFSGSK SGTSASLAITGLQAEDEADYYC QSYDSSLNGPVV (SEQ ID NO: 24) (SEQ ID NO: 25)
CS-E11	(50)				IY GNHNRPS GVPERFSGSK SGSSASLAIAGLQAEDEADYYC QSYDSGLSG-YV (SEQ ID NO: 21) (SEQ ID NO: 22)
CS-A10	(47)				MS QGSKRPL GIPDRISGSN SGTTATLTISGVQTVDEADFYC QTWDRYTGV--V (SEQ ID NO: 27) (SEQ ID NO: 28)
CS-D7	(48)				IY GASTRAT GVPARFSGSG SGTEFTLTISLQSEDFAVYYC QQYNNWRPV--T (SEQ ID NO: 18) (SEQ ID NO: 19)
BMV-C2	(49)				IY DVSKRPS GVPDRFSGSK SGNSASLDISGLQSEDEADYYC AAWDDSLSE-FL (SEQ ID NO: 33) (SEQ ID NO: 34)
BMV-D4	(50)				IY EGSKRPS GVSNRFSKSG SGNTASLTISGLQAEDEADYYC SSYTTRSTR--V
BMV-E 6	(50)				IY EGSKRPS GVSNRFSKSG SGNTASLTISGLQAEDEADYYC SSYTTRSTR--V
BMV-H11	(50)				IY EGSKRPS GVSNRFSKSG SGNTASLTISGLQAEDEADYYC SSYTTRSTR--V (SEQ ID NO: 30) (SEQ ID NO: 31)
CS-D10	(103)	104	114		FGGGTKVTVLG (SEQ ID NO: 5)
CS-E11	(102)				FGTGTKVTVLG (SEQ ID NO: 3)
CS-A10	(98)				FGGGTKVTVLG (SEQ ID NO: 7)
CS-D7	(99)				FGQGTRLEIK- (aa 1-108 of SEQ ID NO: 1)
BMV-C2	(101)				FGTGTKLTVLG (SEQ ID NO: 15)
BMV-D4	(101)				FGGGTKLTVLG (SEQ ID NO: 13)
BMV-E6	(101)				FGGGTKLTVLG (SEQ ID NO: 11)
BMV-H11	(101)				FGGGTKLTVLG (SEQ ID NO: 9)

FIG. 2

	1	CDR1	50
BMV-C2	(1)	EVQLQESGPGLVKPSETLSLTCTVS GGSISSSSYWG	WIRQPPGKGLEWI
BMV-E6	(1)	QVQLQESGPGLVKPSETLSLTCTVS GGSISSSSYWG	WIRQPPGKGLEWI
BMV-D4	(1)	QVQLQESGPGLVKPSETLSLTCTVS GGSISSSSYWG	WIRQPPGKGLEWI
BMV-H11	(1)	RVQLQESGPGLVKPSETLSLICTVS GGSISSSSYWG	WIRQPPGKGLEWI
		(SEQ ID NO: 40)	
CS-D10	(1)	QVQLQESGPGLVKPSETLSLTCTVS GGSIRSSSYWG	WFRQTPGKGLEWL
CS-D7	(1)	QVQLQESGPGLVKPSETLSLTCTVS GGSIRSSSYWG	WFRQTPGKGLEWL
CS-A10	(1)	RVQLQGSGPGLVKPSGTLSTCTVS GGSIRSSSYWG	WFRQTPGKGLEWL
CS-E11	(1)	QVQLQESGPGLVKPSETLSLTCTVS GGSIRSSSYWG	WFRQTPGKGLEWL
		(SEQ ID NO: 35)	
	51	CDR2	99
BMV-C2	(51)	G NMFYSGSAYYNPSLKS	RVSISVGPSSNQFSLKLTSVTAADTAVYYCAR
BMV-E6	(51)	G NMFYSGSAYYNPSLKS	RVSISVGPSSNQFSLKLTSVTAADTAVYYCAR
		(SEQ ID NO: 43)	
BMV-D4	(51)	G NMFYSGGAYYNPSLKN	RVSISVGPSSNQFSLKLSSVTAADTAVYYCAR
		(SEQ ID NO: 44)	
BMV-H11	(51)	G NMFYSGGAYYNPSLKS	RVSISVGPSSNQFSLKLSSVTAADTAVYYCAR
		(SEQ ID NO: 41)	
CS-D10	(51)	G NVFFSGSAYYNPSLKS	RVTISIDTSENQSSLKLTSVTAADTAVYYCAR
		(SEQ ID NO: 38)	
CS-D7	(51)	G NVFFSGSAYYNPSLKN	RVTISIDTSENQSSLKLTSVTAADTAVYYCAR
		(SEQ ID NO: 36)	
CS-A10	(51)	G NVFFSGSAYYNPSLKG	RVTISIDTSENQSSLKLTSVTAADTAVYYCAR
		(SEQ ID NO: 39)	
CS-E11	(51)	G NVFFSGSAYYNPSLKN	RVTISIDTSENQSSLKLTSVTAADTAVYYCAR
		(SEQ ID NO: 36)	
	100	CDR3	128
BMV-C2	(101)	PLGHNFDSSGQGEAFEI	WGQGTTLVTVSS (SEQ ID NO: 16)
BMV-E6	(101)	PLGHNFDSSGQGEAFEI	WGRGTLVTVSS (SEQ ID NO: 12)
		(SEQ ID NO: 45)	
BMV-D4	(101)	PLGYNFDSSGQGKSAFEI	WGKGTMVTVSS (SEQ ID NO: 14)
BMV-H11	(101)	PLGYNFDSSGQGKSAFEI	WGQGTTLVTVSS (SEQ ID NO: 10)
		(SEQ ID NO: 42)	
CS-D10	(101)	PQAYSHDSSG--HSPFDL	WGRGTMVTVSS (SEQ ID NO: 6)
CS-D7	(101)	PQAYSHDSSG--HSPFDL	WGRGTLVTVSS (aa 1-126 of SEQ ID NO:2)
CS-A10	(101)	PQAYSHDSSG--HSPFDL	WGQGTTLVTVSS (SEQ ID NO: 8)
CS-E11	(101)	PQAYSHDSSG--HSPFDL	WGQGTTLVTVSS (SEQ ID NO: 4)
		(SEQ ID NO: 37)	

FIG. 3

## CS-D7 mAb IN OPA

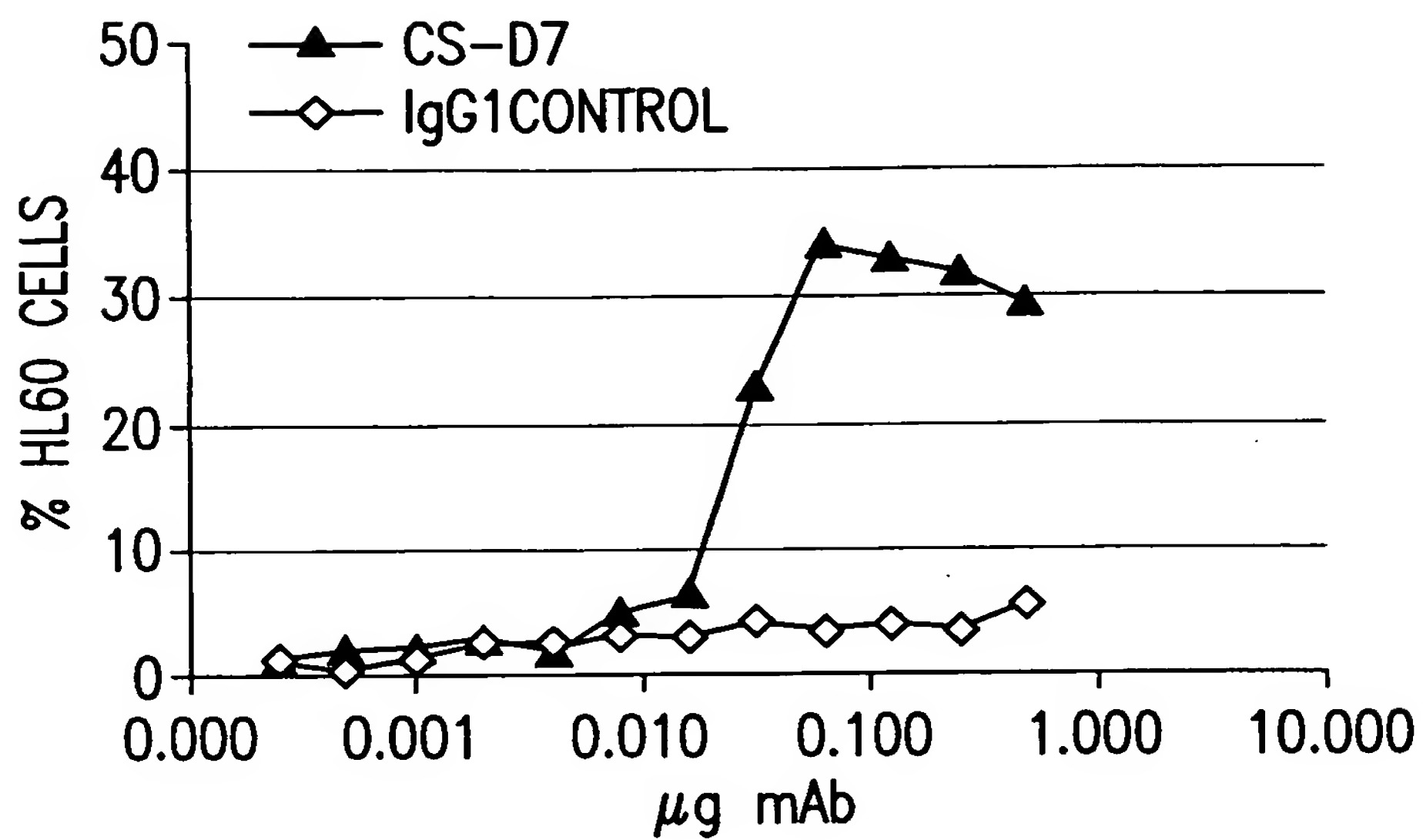


FIG.4

## 0657n mAbs IN OPA

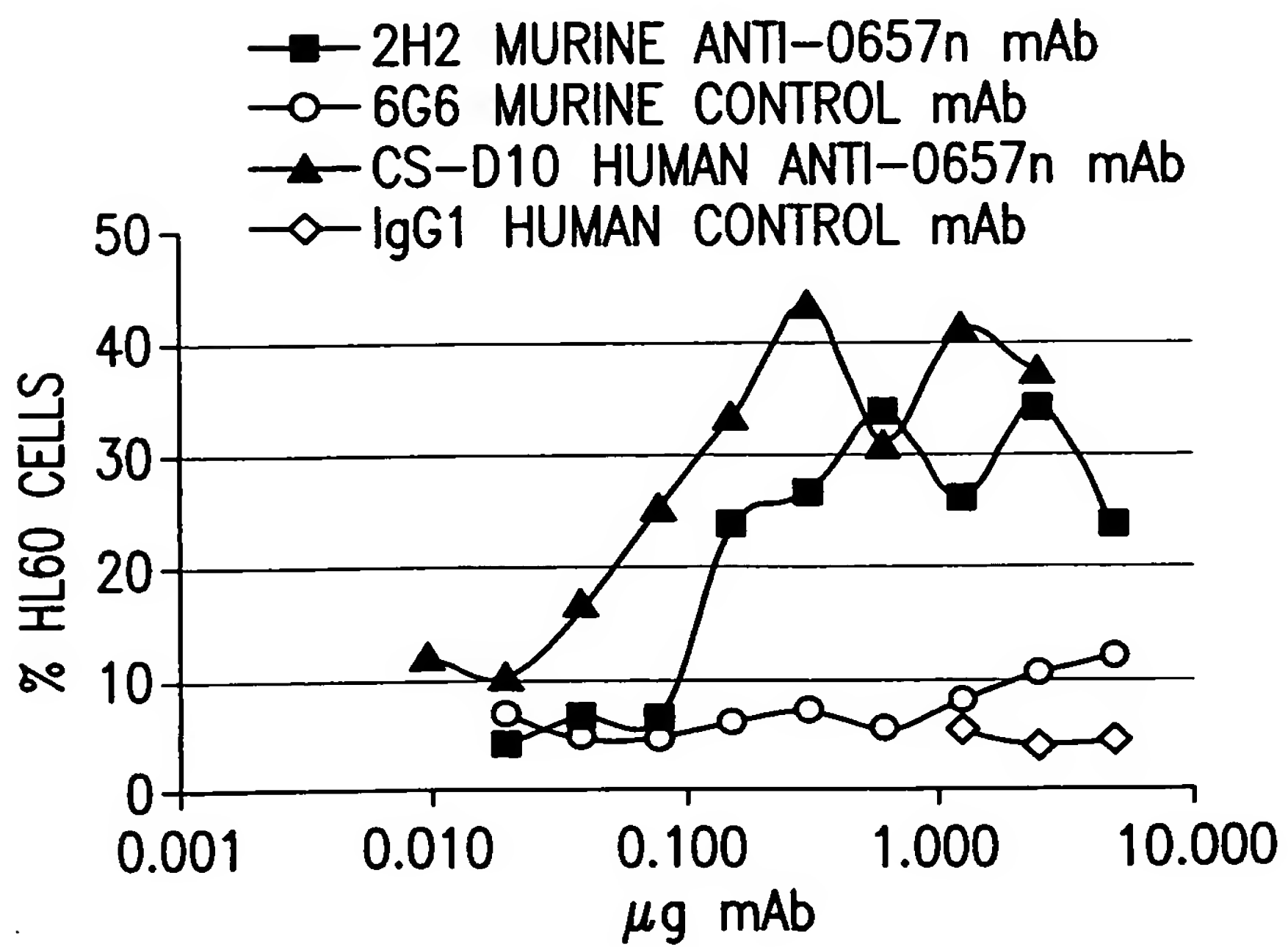


FIG.5

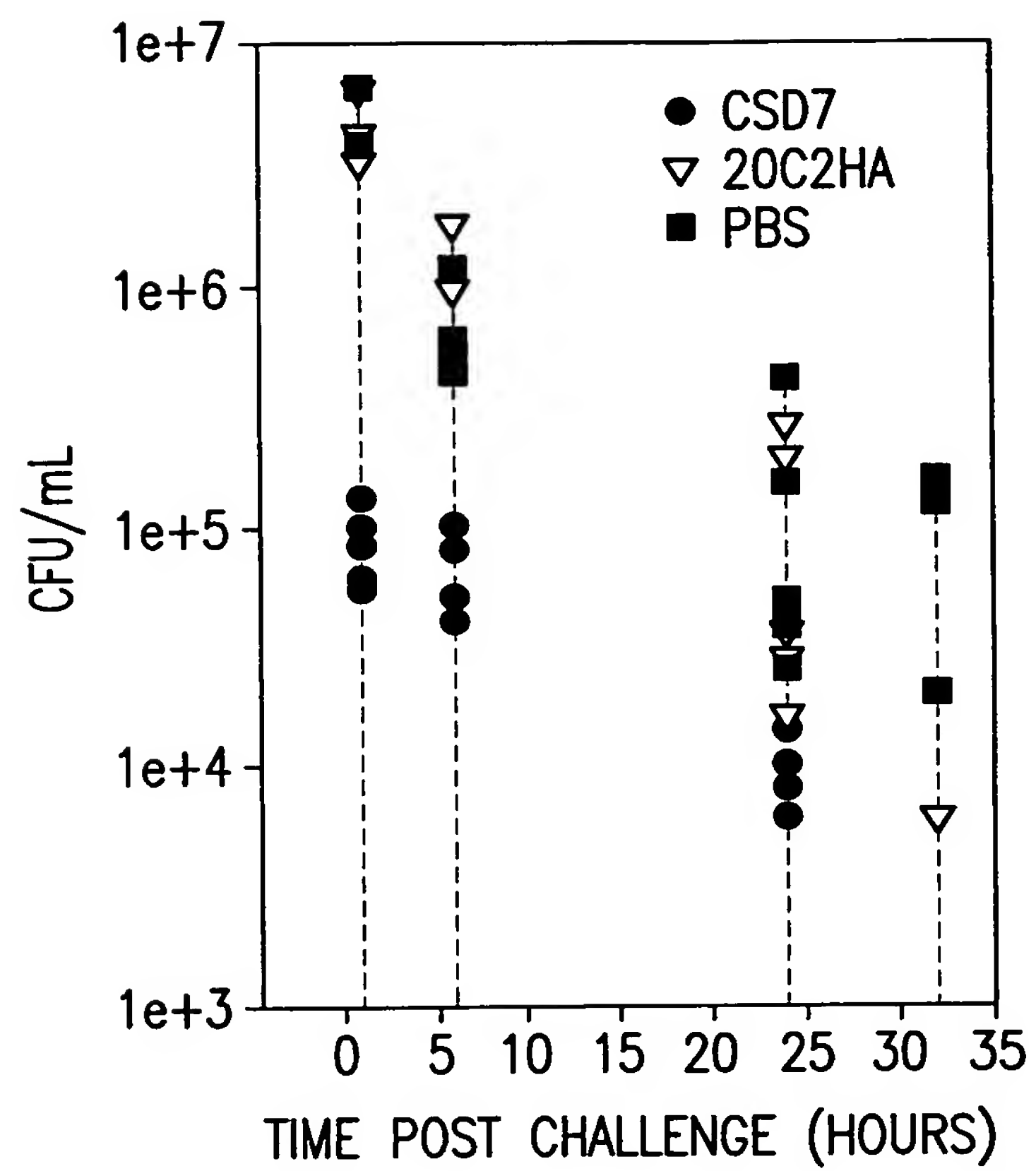


FIG.6